

5/20

DART AEROSPACE LTD	Work Order:	22533
Description: Fwd Crosstube	Part Number:	D2889
Drawing: D2889 Rev. B; D6005 Rev. A	Qty:	9
		Page 1 of 2

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveller <i>Dwg. not required RF 02.11.05</i>	<i>HJ</i>	05.02.23	9
2	PG	Issue P/O: <i>10071058</i> a) Extrude as per Dwg D6005 length = 180" (Ref. D6005-180) b) Material: 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11)) Seamless aluminum tube c) Minimum ultimate tensile strength = 77ksi d) Minimum tensile yield strength = 66ksi e) Material certification required	<i>U</i>	0503-01	9
3	RG	Receive and inspect for transit damage Ensure material certification attached	<i>CL</i>	05/06/10	10
4	QC6	Inspect dimensions as per Dwg D6005 and check 180" length			
5	FP	Acid etch and alodine as per QSI 005 4.1 Inside and outside of tube	<i>5/10 Pmc</i>	05-7-20	10
6	LG	Bend as per Dwg D2889 and Folio FT001 Sign Page 2			
7	QC6	Inspect dimensions per Dwg D2889 Sign Page 2			
8	LG	Deburr and Polish Sign Page 2			
9	FP	Acid etch and alodine as per QSI 005 4.1 Inside and outside of tube Sign Page 2	<i>N/A</i>		
10	QC5	Inspect work to Step 9 Sign Page 2			
11	ST	Identify and stock	<i>DP</i>	5-11-20	
12	AC	Cost / part:	<i>U</i>	06/11/20	
13	DC	Close W/O Inspect Level 21	<i>DP</i>	06/11/20	10

Rev	Date	Change	Revised By	Approved
A	99.05.31	New Issue, ECN 200	DM	
B	00.04.11	Remove Painting step	EC	
C	02.10.18	Re-format; Added spec	KJ <i>RF</i>	<i>JA</i>

RELEASED
02/10/30 RF

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 06/11/20

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

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		Page 2 of 2

W/O Step	A	B	C	D	E	F	G	H	I	J	K	L
6												
7												
8												
9												
10												

RELEASED
02/10/30 RF

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Feb 23, 2005
08:08 am

Work Order No : 0022533
Project Name : D2889
Project For : WK520
Work Order Type : Main
Main WO Number :
House Part Number : D2889
Description : FWD Crosstube
Manufactured : Yes
Amount Req'd : 9
Amount Done : 0
Start Date : 02-23-05
Est Finish Date : 04-28-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00



ALUnna

Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

Kunde:

Client:

Dart Aerospace Ltd.

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada
Tubes seamless extruded

Produkt:

Product / Produit:

Spezifikation:

Specification:

Werkstoff:

Alloy/Alliage:

Abmessung

Size / Dimension

Kennzeichnung

Marking/Marquage:

AMS - QQA 200/11E; Tol. acc to ASTM B 210

7075

2,750 INCH x 2,000 INCH x 0,375 INCH x 180,000 INCH

Article D6005-180 2.750" x 0.375" - buff finish

ALUnna - Xert No. 297/05 - 7075 - T 6511 - Cast No. 79306- QQA 200/11 E - 2.750" OD X 0.375" Wall - Heat No.

3531 - Lot 13285/1-1 - PO: 2007638

Zeugnisnummer:

297/05

Cert No.: / No. du certificat:

Bestellnummer:

2007638

Order No. / No. de commande

Auftrag:

13285/1

Our Reference/Notre Référence:

Zustand:

T 6511

Temper/État

Lieferung

Delivered Material / Matériel délivré:

pcs.

10

lbs

511

1. Chemische Analyse**Chemical Analysis / analyse chimique**

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ min.			1,2		2,1	0,18	5,1						
Cast No. max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
79306	0,108	0,179	1,44	0,032	2,47	0,190	5,94	0,035	0,005	0,029	0,001	0,001	0,007

Elements without indication < 0,01 %

2. Mechanische Eigenschaften**Mechanical Properties / Valeurs Mécaniques**

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat No.
min.	77,0	66,0				
max.						
1	87,435	81,200	8,0		162	3531
2	86,130	79,605	9,0		161	3531

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Results:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

GschwindU



Certified acc. to DIN EN ISO 9001:2000, valid until 2006-03-09
Certificate No.: 001959 QM

ALUnna
Abnahmebeauftragter

11.05.05

Customer PO	PO. 2007638
ALUnna ref. no.	13285/1
Date:	06.21.06

Dart Aerospace PO. 2007638 D 6005-180
Made in Germany
Dest. Hawkesbury ONT. Canada

[illegible]